

**University of Idaho
Pedology Laboratory**
Soil and Land Resources Division, College of Agricultural and Life Sciences

Soil Series: Ardenvoir Gravelly Silt Loam

Pedon Number: 81-ID-0553

County: Benewah

Site Information: NRCS # 81-ID-009-3-1 to 5

Elevation: 4160 ft

Slope: 58 %

Aspect: E

Drainage: well drained

Collected by: NRCS personnel, photo no. 6-38-S

Classification: Loamy-skeletal, mixed, superactive, frigid Typic Haploxerepts

Date Described: 8/3/1981

Location: 1.4 mi SE of St. Joe Baldy; 1850 ft E & 1300 ft S of the NW corner of Sec. 7, T. 46N., R. 1E.

Landform: mountain slope, very steep

Parent Material/Geology: ash and loess over metasedimentary shale

Vegetation: GE, MVP, DF, PAMY, SMST, Mtn. maple, VAME, CLUN, ADBL, THOC, RIBES

Soil Temperature:

Soil Moisture:

FIELD DATA:

PHYSICAL DATA:

CHEMICAL DATA:

Lab No.	pH 1:5	pH Sat.	pH NaF	Elec Cond	Avail. ² P	$\text{NH}_4\text{OAc}_{\text{pH } 7}$ Exchangeable Cations ³				Exch. H ⁺	KCl-Ext. Al ³⁺	CEC _{pH 7}	ECEC ⁴	Base ⁵ Sat.	ESP ⁶	Org. C	N	C:N
				(dS/m)	mg kg ⁻¹	Ca ²⁺	Mg ²⁺	Na ⁺	K ⁺									
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1	5.9	11.3	0.29	4.1	13.5	1.9	0.1	1.0	36.0		14.9		31		8.29	0.49	17	
2	5.8	11.5	0.14	2.4	4.1	0.8	0.1	0.5	32.1		35.0		15		3.94	0.26	15	
3	5.1	9.9	0.14	0.8	2.4	0.8	0.1	0.3	11.9		23.4		23		0.86	0.08	11	
4	5.1	9.2	0.12	0.8	1.4	0.4	0.1	0.2	7.2		6.7		23		0.36	0.04	9	
5	5.0	9.2	0.10	0.0	1.0	0.3	0.1	0.1	6.2		4.8		19		0.33	0.03	11	
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CHEMICAL DATA (cont.):

Lab No.	Sat. Paste H ₂ O	Saturated Paste Extract – Soluble Ions							SAR ⁷	Gypsum	CaCO ₃	P Ret.	CBD		Pyro.		AOD			
		Ca ²⁺	Mg ²⁺	Na ⁺	K ⁺	CO ₃ ⁻	HCO ₃ ⁻	Cl ⁻					Fe	Al	Fe	Al	Fe	Al	Si	P
	%	cmol _c kg ⁻¹										%	% -----							
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1	95												1.06	0.79	0.17	0.47				
2	79												1.18	0.71	0.12	0.31				
3	37												0.83	0.15	0.08	0.07				
4	33												0.67	0.09	0.03	0.03				
5	33												0.66	0.09	0.05	0.04				
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1 Coarse fragments (>2mm) = (wt. coarse fragments >2mm / wt. soil + coarse fragments)*100

Note: This includes gravels, stones, & cobbles, if information is available.

2 Available phosphorus was extracted with 0.7M sodium acetate pH 4.8.

3 Extractable cations ($\text{NH}_4\text{OAc}_{\text{pH } 7}$) – soluble cations (saturated paste extract) = exchangeable cations Note: units are meq/100g or cmol_c kg⁻¹

If there are not any soluble cations assume extractable cations are exchangeable.

4 ECEC = Sum of bases + extractable Al³⁺

5 Base Sat % = (sum of bases/sum of bases + H⁺)*100 or (sum of bases/ECEC)*100 or (sum of bases/CEC_{pH 7})*100

6 ESP = exchangeable sodium percent = (Exchangeable $\text{NH}_4\text{OAc}_{\text{pH } 7}$ Na⁺/CEC_{pH 7})*100

7 SAR = sodium absorption ratio = [Na⁺] / (([Ca²⁺] + [Mg²⁺])/2)^{1/2} Note: conc. are in meq/L

Note: $\text{NH}_4\text{OAc}_{\text{pH } 7}$ = NH_4OAc at pH 7.0

CEC_{pH 7} = CEC at pH 7.0

CEC_{pH 7} solutions were obtained by leaching soil with 10% acidified NaCl. Solutions were analyzed by steam distillation, Technicon Autoanalyzer or by Lachat Quikchem autoanalyzer for N-NH₄.

Nitrogen and CEC were run on the Technicon Autoanalyzer.

Rock is not accounted for in analyses unless noted on the data sheets.

Soil fraction = wt. of soil (g) / wt. of soil + coarse fragments >2mm (g)

A soil without rock (>2mm) would have a soil fraction of 1.